U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Bureau of Land Management
California

Summer 2001

Investing in Energy

Oil and Gas

California is the nation's fourth largest producer of oil and gas from federal lands. In 2000, production totaled over 24.7 million barrels of oil valued at $480 million and 6.2 billion cubic feet of natural gas valued at $15.8 million.

Producing oil well in Central California

Royalties paid to the government amounted to $25.6 million for oil and $2.6 million for natural gas.

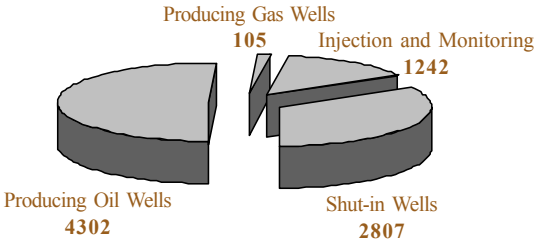
BLM manages 292 active leases with more than 8,000 wells in California. In the last five years, BLM has issued 208 new leases.

The majority of oil and gas leasing and development occur in BLM's Bakersfield Field Office area, where the resource management plan allows for oil and gas leasing and development on nearly all federal lands. Out of more than 1 million acres available for development, only 16,000 acres are closed - less than 2%.

At a recent lease sale, 36 leases were issued covering 22,830 acres generating $275,088, half of the revenue generated was distributed to the state of California.

The Bakersfield office also handles all permitting of oil and gas activities on federal land in California, with over 95% of applications approved the same day the 30 day posting period is over. The remaining 5% are either incomplete or additional time is needed to meet environmental requirements.

BLM Wells - California



"California is the nation's fourth largest producer of oil and gas from federal lands."

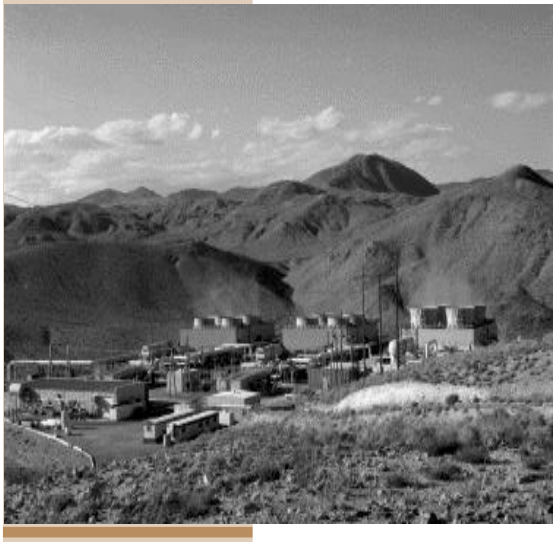
BLM California works cooperatively with the California Division of Oil, Gas and Geothermal Resources to review all idle or orphaned oil and gas wells, with emphasis on those that have been left idle the longest. Operators are being directed to either bring the wells back into production, increase bond coverage, or plug the wells and perform surface restoration.

To encourage development and reduce government red tape, BLM and the state oil and gas division have an agreement to eliminate duplication and streamline the permitting process. Gas and oil operators need obtain one permit and be subject to inspection from one agency.

To ensure public safety and environmental protection, 523 inspections were conducted on 170 leases last year. ■

Geothermal Energy

Production of steam and hot water from the 22 producing geothermal leases on public lands generated over 499 megawatt hours of electricity in 2000. Royalties associated with this level of production totaled over $14.4 million dollars.



The CalEnergy Navy I flash geothermal power plant at the Coso geothermal field

Although in decline due to decreasing reservoir pressure, the Geysers field in Lake County still produces over 46% of the total royalties from federal geothermal leases in California, with Coso Hot Springs at second with over 34%, and East Mesa at third with almost 17%. Other fields in production include Heber, Mammoth Lakes, and Wendel-Amedee.

BLM inspectors conducted 460 lease inspections in 2000 to ensure compliance with the operation of 272 production and 88 injection wells, and 12 powerplants located on federal geothermal leases in California.

"Geothermal leases generated 499 megawatt hours of electricity in FY 2000"

The Southeast Geysers Effluent Pipeline, an effort to help reduce the reservoir pressure decline at the Geysers, began injecting fluid into the reservoir on September 25, 1997. The additional steam generated has increased production by approximately 68 megawatts and will help prolong the useful life of the field. The majority of this increase has been from federal geothermal leases. Due to the success of the injection to produce additional steam from the reservoir, the pipeline may be extended to collect more water from other communities in the Lake County area. It is estimated that the increase in the injection of water could further increase the Geysers output by 20 to 30 megawatts. Santa Rosa is planning to build a second water injection pipeline to The Geysers from the Sonoma County side of the field in 2002, which will increase production from private, state, and federal geothermal leases in the field.

With energy in California continuing to be an important issue, two proposed geothermal power projects for the Medicine Lake Highlands in Siskiyou County are attracting much attention. After a lengthy environmental analysis, BLM and the U.S. Forest Service issued Records of Decision on May 31, 2000, denying one project and granting the other. Both projects were first proposed in 1996. The Fourmile Hill Geothermal Development Project was approved, while the Telephone Flat Geothermal Development Project was denied. The Fourmile Hill project will consist of a 49.9 megawatt geothermal power plant and well field, along with a 24 mile, 230 kilovolt transmission line to carry the electricity to an existing power corridor. The Telephone Flat project was denied because the location of wells and power plants within the volcanic caldera would create significant noise and visual impacts to recreation visitors, homeowners, and Indian tribes.

While the proposed development in the northern part of the state drew most of the attention, exploration drilling activities continue on a federal geothermal lease in the southern California at Coso Hot Springs, near Ridgecrest. ■

"Energy demands in California are generating new interest in geothermal leasing and development on federal lands"

Wind Energy

The 2,960 wind turbines installed on public land outside of Palm Springs have the capacity to generate 315 megawatt hours of electrical power, enough to supply the needs of about 300,000 people. Annual rental receipts to the federal government amount to nearly half a million dollars. Wind energy is authorized, under the Federal Land Policy Management Act of 1976. BLM has granted 22 Rights-of-Way, covering 2,842 acres, that are currently producing electricity.

"capacity to generate 315 megawatt hours of electrical power, enough to supply 300,000 people."

BLM is working with the wind energy industry on the installation of additional wind turbines in the California Desert. In addition, BLM is facilitating the replacement of some older, smaller turbines with larger, more efficient turbines. The new turbines will be able to produce more electricity for a given wind velocity.

One of the restraints on developing more wind energy on public land is the exclusion of wind energy in BLM land use plans. As a result, wind energy proposals require a plan amendment, including subsequent NEPA compliance. The one exception to this is the California Desert Plan which identified areas suitable for wind energy. BLM Field Offices are developing Resource Management Plans that will include wind energy as well as other alternative energy sources such as geothermal, solar, and biomass. ■

Wind energy field in southern California

BLM California FY 2000

Production		Revenues (In Millions of dollars)	
Oil	24.7 Million Barrels	Oil and Gas	28.8
Gas	6.2 Billion Cubic Feet	Geothermal	14.4
Geothermal	499 Megawatt Hours of Electricity	Right-of-Way Rent	1.8
Wind Energy	315 Megawatt Hours of Electricity	Wind Energy	.5

Biomass

California is the largest producer of energy from biomass in the United States accounting for over 2% of the total internal state energy production.

Juniper trees in northern California

In the biomass arena, BLM has a significant opportunity to become a major supplier of fuels for biomass cogeneration facilities. Currently, BLM is supplying some forest products to generators on a pilot plant study basis. Production of these fuels in the future could have a beneficial, synergistic impact on the health of the lands, while also supplying valuable needed materials for energy development.

Materials collected from residuals from timber sales, insect eradication, forest fire restoration, and "type conversions" (elimination of Juniper encroachments) could have the potential of providing a significant amount of fuels for energy production and revenue.

Under the National Fire Plan, areas of significant fire potential have been identified for targets of future fuels reduction programs. These fire hazard areas also represent a potentially valuable source of fuel supply, which if commercially harvested, could be considered an asset rather than a dangerous liability. Juniper encroachment has been traditionally costing the BLM up to $100 per acre to treat. In the Alturas, Eagle Lake, and Surprise field office areas alone, over 3 million acres of Juniper habitat pose a potential problem, which biomass may help resolve. Over 300,000 acres have already been identified as areas requiring some form of treatment.

Sources of fuel supplies have been a long standing problem with the cogeneration operations. The last several years the overall amount of logging has significantly decreased as a result of environmental considerations. This has caused a significant shortage of supply of residual logging materials - a primary component of past fuel sources. With the rapid change in the energy market, cogenerators are actively seeking new and dependable sources of combustible materials, and have now, in response, expanded their market search areas to over 100 miles from a power plant location. BLM has a very significant opportunity of becoming a major supplier of renewable energy resource materials. ■

Oil and gas field near Bakersfield

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